

INDEX TO VOLUME 59

AUTHOR

Allred, J. N., L. G. Raggi and G. G. Lee: Susceptibility and resistance of pheasants, starlings, and quail to three respiratory diseases of chickens, 161-167

Bennett, Donald E.: *see* Wydoski and Bennett, 178-190

Bond, Carl E.: Occurrence of the reticulate sculpin, *Cottus perplexus*, with distributional notes on *Cottus gulosus* in Oregon and Washington, 93-94

Bond, Carl E.: *see* Krygier, Johnson and Bond, 140-142

Borneman, John C.: *see* Mallette, Wilbur, Carrier and Borneman, 317-318

Carlisle, John G., Jr.: Results of the 1971 Pismo clam census, 138-139; The census of northern elephant seals on San Miguel Island, 1965-1973, 311-313

Carrier, W. Dean: *see* Mallette, Wilbur, Carrier and Borneman, 317-318

Cohen, Joel L.: An albino grey smooth-hound *Mustelus californicus* Gill, 210-211

Crooke, Stephen J.: The first occurrence of *Kyphosus analogus* in California, 310-311

D'Amico, Karen: *see* Rosen, D'Amico and O'Neill, 209-210

Fierstine, Harry L., Kurt F. Kline and Gregory R. Garman: Fishes collected in Morro Bay, California between January, 1968 and December, 1970, 73-88

Fisher, Frank: Observations on the spawning of the Mississippi silversides, *Menidia audens*, Hay, 315-316

Garman, Gregory R.: *see* Fierstine, Kline and Garman, 73-88

Gerdes, Gene L.: *see* Pine and Gerdes, 126-137

Haaker, Peter L.: Ambicoloration in some California flatfishes, 299-304

Hardwick, James E.: Biomass estimates of spawning herring, *Clupea harengus pallasi*, herring eggs, and associated vegetation in Tomales Bay, 36-61

Hashagen, Kenneth A., Jr.: Population structure changes and yields of fishes during the initial eight years of impoundment of a warmwater reservoir, 221-244

Hoover, Franklin G.: *see* St. Amant, Hoover and Stewart, 151-153

Human, Vernon L.: Albinism in three species of marine invertebrates from southern California, 89-92

Johnson, William C.: *see* Krygier, Johnson and Bond, 140-142

Kimura, Makoto: Inconsistencies in locating the first annulus of Pacific sardines, 191-195

Kline, Kurt F.: *see* Fierstine, Kline and Garman, 73-88

Knaggs, Eric H. and Richard H. Parrish: Maturation and growth of Pacific mackerel, *Scomber japonicus* Houttuyn, 114-120

Krygier, Earl E., William C. Johnson and Carl E. Bond: Records of the California tonguefish, threadfin shad and smooth alligatorfish from Yaquina Bay, Oregon, 140-142

Lea, Robert N.: First record of the smooth alligatorfish, *Anoplagonus intermedius* (family Agonidae), from California waters, 142-144

Lee, G. G.: *see* Allred, Raggi and Lee, 161-167

Love, Milton S. and John Vucci: Partial ambicoloration in three California flatfishes, 146-148

Mallette, Robert D., Sanford R. Wilbur, W. Dean Carrier, and John C. Borneman: California condor survey, 1972, 317-318

McCollum, Michael T.: *see* Yocom and McCollum, 305-309

Miller, Richard L., Andrew C. Olson, Jr. and Lee W. Miller: Fish parasites occurring in thirteen southern California reservoirs, 196-206

Morejohn, G. Victor and Dale W. Rice: First record of Bryde's whale (*Balaenoptera edeni*) off California, 313-315

O'Neill, Edward J.: *see* Rosen, D'Amico and O'Neill, 209-210

Parrish, Richard H.: *see* Knaggs and Parrish, 114-120; The California safflefish fishery for the period 1953-1969, 168-177

Pelzman, Ronald J.: California inland angling survey for 1970, 100-106

Pine, Donald S. and Gene L. Gerdes: Wild pigs in Monterey County, California, 126-137

Raggi, L. G.: *see* Allred, Raggi and Lee, 161-167

Rawstron, Robert R.: Comparison of disk dangler, trailer, and internal anchor tags on three species of salmonids, 266-280; Harvest, mortality, and cost of three domestic strains of tagged rainbow trout stocked in large California impoundments, 245-265

Rice, Dale W.: *see* Morejohn and Rice, 313-315

Roche, Edward T. and James A. St. Amant: Potential danger from the Indian catfish, *Heteropneustes fossilis* (Bloch), 144-145

Rollins, Glenn L.: Relationships between soil salinity and the salinity of applied water in the Suisun Marsh of California, 5-35

Rosen, Merton N., Karen D'Amico and Edward J. O'Neill: First record of a golden eagle death due to avian cholera, 209-210

Samollow, Paul B.: *see* Valentine and Samollow, 148-151

Schultz, Peter D. and Dwight D. Simons: Fish species diversity in a prehistoric central California Indian midden, 107-113

Simons, Dwight D.: *see* Schulz and Simons, 107-113

Spratt, Jerome D.: Age and length composition of northern anchovies (*Engraulis mordax*) landed in California for reduction during the 1970-71 season, 121-125; age and length composition of northern anchovies, *Engraulis mordax*, in the California reduction fishery for the 1971-72 season, 293-298

St. Amant, James A.: *see* Roche and St. Amant, 144-145

St. Amant, James A., Franklin G. Hoover and Glenn R. Stewart: African clawed frog, *Xenopus laevis laevis* (Daudin), established in California, 151-153

Stewart, Glenn R.: *see* St. Amant, Hoover and Stewart, 151-153

Tomlinson, Patrick K.: *see* von Geldern and Tomlinson, 281-292

Valentine, David W. and Paul B. Samollow: A deformed kelp bass, *Paralabrax clathratus* (Girard), from Alijos Rocks, Baja California, 148-151

von Geldern, C. E., Jr. and Patrick K. Tomlinson: On the analysis of angler catch rate data from warmwater reservoirs, 281-292

Vucci, John: *see* Love and Vucci, 146-148

Wilbur, Sanford R.: *see* Mallette, Wilbur, Carrier and Borneman, 317-318

Wydoski, Richard S. and Donald E. Bennett: Contributions to the life history of the silver surfperch (*Hyperoplus ellipticum*) from the Oregon coast, 178-190

Yocom, Charles F.: Wolverine records in the Pacific coastal states and new records for northern California, 207-209

Yocom, Charles F. and Michael T. McCollum: Status of the fisher in northern California, Oregon and Washington, 305-309

Young, Parke H.: Partyboat logs show how skin and scuba divers fared—1965 through 1970, 62-72

SCIENTIFIC NAMES

Acipenser sp.: 48, 110

Anoplagonus inermis: 140-142, 142-144
fimbria: 168-177

Aquila chrysaetos: 200-210

Archoplites interruptus: 109, 222

Atriplex patula: 9-35

Balaenoptera edeni: 313-315

Branta nigricans: 59

Cancer sp.: 48

Catostomus occidentalis: 109

Citharichthys xanthostigma: 146-148

Clupea harengus pallasi: 36-61

Cottus aleticus: 94
asper: 94
gulosus: 93-94
perplexus: 93-94

Cotula coronopifolia: 9

Diclidophora sp.: 188-189

Distichlis spicata: 9

Dovoroma petenense: 140-142, 222

Engraulis mordax: 121-125, 293-298

Enteromorpha sp.: 38

Entosphenus tridentatus: 85

Fucus sp.: 58

Fulica americana: 46

Gigartina sp.: 58

Gila crassicauda: 109

Gracilaria sjoestedtii: 55
sp.: 40
verrucosa: 55

Gulo luscus: 207-209

Gymnogyps californianus: 317-318

Heteropneustes fossilis: 144-146

Hippoglossina stomatica: 290

Hyperoplus ellipticum: 178-190

Hypsopsetta guttulata: 146-148

Ictalurus melas: 222
nebulosus: 222
punctatus: 222
Juncus balticus: 17
Kyphosus analogus: 310-311
Larus californicus: 46
canus: 46
glaucus: 46
occidentalis: 46
Lavinia exilicauda: 109
Lepomis cyanellus: 221-244
macrochirus: 202, 221-244, 283
microlophus: 221-244
Lophortyx californica: 161-167
Macrocytis pyrifera: 48, 75
Martes pennanti: 305
Melanitta perspicillata: 46
Menidia audens: 315-316
Micropterus dolomieu: 221-244
seimoides: 203, 221-244, 283
Microstomus pacificus: 300
Mirounga angustirostris: 311-313
Mustelus californicus: 210-211
Mycoplasma gallisepticum: 161-167
Oncorhynchus kisutch: 223, 266-280
Ophioderma panamense: 89, 92
Paralabrax clathratus: 148-151
Pasteurella multocida: 209-210

Patiria miniata: 89, 91
Pelvetiopsis sp.: 58
Phasianus colchicus torquatus: 161-167
Phyllospadix sp.: 40
Pleuronichthys coenosus: 146-148
decurrentis: 300
verticalis: 302
Pogonichthys macrolepidotus: 100
Polysiphonia sp.: 38
Pomoxis nigromaculatus: 223, 283
Ptychocheilus grandis: 222
Renilla kollikeri: 89-90
Rhaphanus sativus: 9
Rumex sp.: 9
Salicornia sp.: 9
virginica: 17
Salmo gairdneri: 223, 245-265, 266-280
trutta: 222, 266-280
Scirpus olneyi: 9
robustus: 9-35
Scomber japonicus: 114-120
Sturnus vulgaris: 161-167
Sus scrofa: 126-137
Sympodus atricauda: 140-142, 302
Typha latifolia: 17
Ulva sp.: 40
Xenopus laevis laevis: 151-153
Zostera marina: 37, 75

SUBJECT

Age and growth: of silver surfperch, 180-183
 Age composition: of northern anchovy catch, 121-125, 293-298
 Aging: of Pacific sardines, 191-195
 Albinism: in a grey smoothhound, 210-211; in three species of marine invertebrates, 89-92
 Algae, marine: in relation to herring spawning at Tomales Bay, 36-61
 Alligatorfish, smooth: record from Yuquina Bay, 140-142; record from California waters, 142-144
 Ambicoloration: partial in California flatfish, 146-148, 299-304
 Anchovy, northern: age and length composition of 1970-71 catch, 121-125; reduction fishery in 1971-72, 293-298
 Angler: catch rate data from warmwater reservoirs, 281-292
 Angling: survey of inland fishing, 100-106
 Bass, black: survey of 1970 catch, 102
 Bass, kelp: deformed specimen, 148-151
 Bass, striped: survey of 1970 catch, 102
 Catch rate: evaluation on warmwater reservoirs, 281-292
 Catfish: survey of 1970 catch, 103
 Catfish, Indian: potential danger from handling, 144-145
 Census: condor survey, 1972, 317-318; of Pismo clams in 1971, 138-139
 Censuses: of northern elephant seals at San Miguel Island, 311-313
 Cholera, avian: as cause of eagle death, 209-210
 Chub, thickettail: remains in Indian midden, 109
 Clams, Pismo: census in 1971, 138-139
 Collecting: of fishes at Morro Bay, 73-88
 Condor, California: 1972 census, 317-318
 Costs: of strains of rainbow trout planted in reservoirs, 245-265
 Depredation: by wild pigs in Monterey County, 133
 Disease: avian cholera in golden eagle, 209-210
 Disease, respiratory: susceptibility of pheasants, quail and starlings, 161-167
 Distribution: Bryde's whale reported off California, 313-315; of African clawed frog in California, 151-153; of fishers in northern California, Oregon and Washington, 305-309; of fishes in Morro Bay, 73-88; of sculpins in California, Oregon, and Washington, 93-94; of spawning herring in Tomales Bay, 36-61; of wild pigs in Monterey County, 127; of wolver-

ine in Pacific coastal states, 207-209; specimen of *Kyphosus analogus* taken off California, 310-311

Divers, scuba and skin: party boat operations, 62-72

Eagle, golden: death due to avian cholera, 209-210

Eggs, herring: spawning at Tomales Bay, 36-61

Fisher: distribution in northern California, Oregon and Washington, 305-309

Fishery: anchovy reduction in 1970-71 season, 121-125; herring egg-on-seaweed and herring at Tomales Bay, 36-61; of sablefish for period 1953-1960, 168-177

Fishery, reduction: of anchovies during 1971-72 season, 293-298

Fishes: collected at Morro Bay, 73-88; population structure during initial 8 years of reservoir life, 221-244; species in a prehistoric Indian midden, 107-113; taken by divers operating off partyboats, 62-72

Flatfishes: reported ambicoloration, 146-148, 299-304

Food habits: of wild pigs in Monterey County, 134-136

Frog, African clawed: established in California, 151-153

Growth: of Pacific mackerel, 114-120

Harvest: of strains of rainbow trout in reservoirs, 245-265

Herring, Pacific: biomass estimates of spawning at Tomales Bay, 36-61

Hitch: remains in Indian midden, 109

Hunting: for wild pigs in Monterey County, 133

Infectious bronchitis: susceptibility of pheasants, quail and starlings, 163

Infectious laryngotracheitis: susceptibility of pheasants, quail and starlings, 162-163

Infiltrometer: use in determining relationship of soil salinity and applied water, 16-35

Invertebrates, marine: albinism described for three species, 80-92

Lake Berryessa: site of study of planting strains of rainbow trout, 248

Lake Isabella: site of study of planting strains of rainbow trout, 259

Length composition: of north anchovy catch, 121-125

Life history: study of the silver surfperch, 178-190

Lobster, spiny: taken by divers operating off party boats, 62-72

Mackerel, Pacific: study of growth and maturation, 114-120

Management: of rainbow trout fishery in California impoundments, 263

Maturation: of Pacific mackerel, 114-120

Merle Collins Reservoir: site of study of planting strains of rainbow trout, 253

Methods: determining biomass of herring spawning at Tomales Bay, 36-61; evaluation of angler catch rates, 281-292; evaluation of fish tags used on salmonids, 266-280; locating first annulus of Pacific sardines, 191-195; sampling fishes at Morro Bay, 73-88; studying life history of silver surfperch, 178-190; study of cost, harvest, and mortality of rainbow trout planted in reservoirs, 245-265; study of fish populations in warmwater reservoir, 221-244; study of relationship of soil salinity and applied water, 5-35; survey of 1970 inland angling, 100-106; testing susceptibility of pheasants, quail and starlings to chicken diseases, 161-167

Midden, Indian: fish species in a prehistoric site, 107-113

Molluscs: taken by divers operating off partyboats, 62-72

Morro Bay: fishes collected, 73-88

Mortality: of strains of rainbow trout in reservoirs, 245-265

Panfish: survey of 1970 catch, 103

Parasite: monogenetic trematode of surfperch, 187-188

Parasites: of fish in southern California reservoirs, 196-206

Partyboats: in relation to skin and scuba diver fishery, 62-72

Perch, Sacramento: remains in Indian midden, 109

Pheasants, ring-neck: susceptibility to chicken respiratory diseases, 161-167

Pigs, wild: life history study in Monterey County, California, 126-137

Pine Flat Lake: site of study of planting strains of rainbow trout, 256

Population structure: yields of fishes during initial 8 years of reservoir life, 221-244

Predation: on herring eggs at Tomales Bay, 46-61

Quail, valley: susceptibility to chicken respiratory diseases, 161-167

Raptors: observed during 1972 condor survey, 317

Reservoirs, warmwater: analysis of angler catch rate, 281-292; fish population structure during initial years of reservoir life, 221-244

Reviews: A field guide to the birds of Mexico, 95-96; Aquaculture: the farming and husbandry of freshwater and marine organisms, 212; Art Flick's master fly-tying guide, 320; California water: a study in resource management, 95; Diseases of fish, 213; Fishing the dry fly as a living insect, 154; Fly-tying problems and their answers, 155; Gifts of an eagle, 213; Growth and ecology of fish populations, 319-320; Modern book of the black bass, 96; Modern fresh and saltwater fly fishing, 95; Modern saltwater sport fishing, 319; Nymphs, 321; Nymphs, and the trout, 320; Practical fishing knots, 156; Saltwater flies—polar patterns and how to tie them, 319; Statistical ecology, vol. 1, spatial patterns and statistical distributions, 213-214; The biology of lampreys, 154; The steelhead trout, 155; The stern trawler, 96; The way of a trout, 155; This wonderful world of trout, 213; Through the fish's eye, 320; Trout fishing, 154

Retirement: of Leo Shapovalov, 215

Sablefish: description of fishery for period 1953-1969, 168-177

Salinity: soil salinity and applied water, 5-35

Salmon, coho: use of tags in marking, 266-280

Salmonids: comparison of tag types used in marking, 266-280

Sanddab, longfin: ambicoloration, 146

San Miguel Island: censuses of northern elephant seals, 311-313

Sardine, Pacific: locating first annulus, 191-195

Sculpin, reticulate: occurrence in California, 93-94

Seals, northern elephant: censuses at San Miguel Island, 311-313

Seaweed: in relation to herring spawning at Tomales Bay, 36-61

Shad, threadfin: record from Yaquina Bay, 140-142

Shapovalov, Leo: retirement notice, 215

Silversides, Mississippi: spawning observations, 315-316

Smoothhound, grey: albino specimen, 210-211

Soils: relationships of salinity to applied water, 5-35

Sole, bigmouth: reported ambicoloration, 290

Sole, e-o: ambicoloration, 146-147

Sole, curlfin: reported ambicoloration, 301

Sole, Dover: reported ambicoloration, 300

Spawning: observations of the Mississippi silversides, 315-316; of herring at Tomales Bay, 36-61

Splittail: remains in Indian midden, 109

Starlings: susceptibility to chicken respiratory diseases, 161-167

Sturgeon: remains in Indian midden, 109; survey of 1970 catch, 102

Sucker, Sacramento: remains in Indian midden, 109

Suisun Marsh: site of study on soil salinity and applied water, 5-35

Surfperch, silver: life history study, 178-190

Survey, angling: of inland fishing for 1970, 100-106

Tag, anchor: evaluation of use on salmonids, 266-280

Tag, disk dangler: evaluation of use on salmonids, 266-280

Tag, trailer: evaluation of use on salmonids, 266-288

Tomales Bay: estimate of herring spawning, 36-61

Tonguefish, California: record from Yaquina Bay, 140-142; reported ambicoloration, 302

Trematode, monogenetic: parasite of surfperches, 187-188

Trout: survey of 1970 catch, 102

Trout, brown: use of tags in marking, 266-280

Trout, rainbow: harvest, mortality, and costs of three strains planted in reservoirs, 245-265; use of tags in marking, 266-280

Turbot, diamond: ambicoloration, 146-147

Turbot, horneyhead: reported ambicoloration, 302

Vegetation, marine: in relation to herring spawning at Tomales Bay, 36-61

Water management: recommendations for the Suisun Marsh duck club areas, 32-35

Whale, Bryde's: first report off California, 313-315

Wolverine: records for Pacific coastal states, 207-209

Yaquina Bay: records of California tonguefish, threadfin shad and smooth alligatorfish, 140-142